

CLAIMS

1. Method for managing a battery system including a number of serially coupled batteries **characterized** by the steps of
 - 5 detecting the battery voltage over the batteries of the battery system; and
 - utilizing a voltage imbalance between different batteries of the system during operation of the battery system.
- 10 2. Method according to claim 1, further comprising the step of controlling the voltage distribution of the batteries to create a voltage imbalance between different batteries of the battery system.
- 15 3. Method according to claim 1, wherein the step of controlling the voltage distribution comprises the step of controlling the voltage distribution of the batteries to enhance a detected voltage imbalance between the different batteries of the system.
- 20 4. Method according to any one of preceding claims, further comprising the step of alternating between batteries of the battery system having different voltages during predetermined intervals.
- 25 5. Method according to any one of the preceding claims, wherein the step of utilizing the voltage imbalance comprises the step of utilizing the voltage imbalance between different batteries of the system during the charging and/or discharging of the batteries.
- 30 6. Method according to claim 1, further comprising the step of sensing a battery parameter of the battery system; and

utilizing the sensed battery parameter for the control of the voltage distribution

7. Method according to claim 4, wherein the step of sensing a
5 battery parameter comprises the step of
sensing the temperature at the battery system.
8. Device for managing a battery system including a number of
10 serially coupled batteries **characterized** by
voltage detecting means connected to said battery system and
arranged to detect the battery voltage over the batteries of the
battery system;
DC-to-DC-converting means connected to said battery system;
and
15 a controller connected to said voltage sensing means and to
said DC-to-DC-converting means and being arranged to control
the voltage distribution over the batteries of the battery system
via said DC-to-DC-converting means.
- 20 9. Device according to claim 8, further comprising means for sensing
a battery parameter of said battery system connected to said
controller and wherein said controller is arranged to utilize said
parameter at said control of the voltage distribution.
- 25 10. Device according to claim 9, wherein said means for sensing a
battery parameter is a temperature sensor for sensing a
temperature at said battery system.
- 30 11. Device according to any one of the preceding claims, further
comprising a timer unit connected to said controller

12. Computer readable medium comprising instructions for bringing a computer to perform a method according to any one the claims 1-7.

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